

- an acetylated, glycosylated, amidated, and/or phosphorylated naturally occurring allelic variation of SEQ ID NO: 1 or SEQ ID NO: 2,
- an acetylated, glycosylated, amidated, and/or phosphorylated SEQ ID NO: 1 or SEQ ID NO: 2 having one inserted, deleted, or conservatively substituted amino acid,
- an acetylated, glycosylated, amidated, and/or phosphorylated N-terminally truncated or C-terminally truncated SEQ ID NO: 1 or SEQ ID NO: 2, or
- acetylated, glycosylated, amidated, and/or phosphorylated SEQ ID NO: 1 or SEQ ID NO: 2.

D1

38. N-terminally truncated or C-terminally truncated SEQ ID NO: 1 or SEQ ID NO: 2 having eukaryotic neutral sphingomyelinase enzymatic activity.
39. A medicament containing the isolated eukaryotic neutral sphingomyelinase according to claim 36, together with auxiliary agents.
40. A diagnostic agent containing the isolated eukaryotic neutral sphingomyelinase according to claim 36, together with auxiliary agents.
41. The isolated eukaryotic neutral sphingomyelinase of claim 36, wherein the sequence is SEQ ID NO: 1 or SEQ ID NO: 2.

42. The isolated eukaryotic neutral sphingomyelinase of claim 36, wherein the sequence is a variant of SEQ ID NO: 1 or SEQ ID NO: 2 having eukaryotic neutral sphingomyelinase enzymatic activity, wherein the variant is a naturally occurring allelic variation of SEQ ID NO: 1 or SEQ ID NO: 2.

43. The isolated eukaryotic neutral sphingomyelinase of claim 36, wherein the sequence is a variant of SEQ ID NO: 1 or SEQ ID NO: 2 having eukaryotic neutral sphingomyelinase enzymatic activity, wherein the variant is SEQ ID NO: 1 or SEQ ID NO: 2 having one inserted, deleted, or conservatively substituted amino acid.
D1

44. The isolated eukaryotic neutral sphingomyelinase of claim 36, wherein the sequence is a variant of SEQ ID NO: 1 or SEQ ID NO: 2 having eukaryotic neutral sphingomyelinase enzymatic activity, wherein the variant is N-terminally truncated or C-terminally truncated SEQ ID NO: 1 or SEQ ID NO: 2.

45. The isolated eukaryotic neutral sphingomyelinase of claim 36, wherein the sequence is a variant of SEQ ID NO: 1 or SEQ ID NO: 2 having eukaryotic neutral sphingomyelinase enzymatic activity, wherein the variant is acetylated, glycosylated, amidated, and/or phosphorylated SEQ ID NO: 1 or SEQ ID NO: 2.